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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,494	11/09/2001	Kent K. Leung	CISCP206/3599	5343

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EXAMINER
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SHAH, CHIRAG G

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/008,494	LEUNG ET AL.	
	Examiner	Art Unit	
	Chirag G. Shah	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 2/9/06.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 20-41 and 50-55 is/are rejected.
- 7) ☐ Claim(s) 7-22, 31-39 and 42-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's request filed for reconsideration of Restriction has been granted and thus, claims 1-55 have been examined on the merit.

### *Claim Objections*

2. Claims 51-52 and 54-55 recite limitations "adapted for". Under MPEP 2106, pages 2100-8, "language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. Appropriate action/correction must be made.

### *Double Patenting*

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 12 of U.S. Patent No. 6195705. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the present application discloses of sending a multicast message to a virtual router group, whereas claim 12 of the U.S. Patent No. 6195705 discloses of sending a message to a standby Mobility Agent, which shares a virtual IP address known. In other words, both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address. Furthermore, it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 168 USPQ 375 (bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

Claim-by-claim comparison of the two applications:

Regarding claim 1, In a Home Agent, a method of maintaining Mobile IP operation, the method [see claim 12, lines 1-2, U.S. Patent No. 6,195,705] comprising:

registering a Mobile Node [see claim 12, line 4, U.S. Patent No. 6,195,705];

creating a registration entry for the Mobile Node in a mobility binding table [see claim 12, lines 5-6, U.S. Patent No. 6,195,705; the registration entry for the mobile node must be performed in the binding table]; and

sending a multicast message to a virtual router group to which the Home Agent belongs and with which the Home Agent shares a virtual IP address, the multicast message notifying the

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virtual router group of the registration [see claim 12, lines 7-10, U.S. Patent No. 6,195,705; both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address.].

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the present application discloses of sending a multicast message to a virtual router group, whereas claim 12 of the U.S. Patent No. 6195705 discloses of sending a message to a standby Mobility Agent, which shares a virtual IP address known. In other words, both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address. Furthermore, it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. Therefore, it would have been obvious to one skilled in the art at the time of the invention to include or eliminate multicasting portion of sending a message since sending the message is sent to device(s) sharing the virtual IP address known.

5. Claims 51-53 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29, 34, and 24 respectively of U.S. Patent No. 6487605.

Although the conflicting claims are not identical, they are not patentably distinct from each other because for example claim 52 of the present application discloses of sending a multicast message to a virtual router group, whereas claim 34 of the U.S. Patent No. 6,487,605 discloses of sending a message to a standby Mobility Agent, which shares a virtual IP address known. In other words, both claims primarily suggest of the active Mobility/Home Agent on a network segment

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sending a message to an additional device(s) sharing the virtual IP address. Furthermore, it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 168 USPQ 375 (bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

Claim-by-claim comparison of the two applications:

Regarding claim 52, an apparatus adapted for maintaining Mobile IP operation in a Home Agent [see claim 34, lines 1-2 in U.S. Patent No. 6487605], comprising:

means for registering a Mobile Node [see claim 34, line 3 in U.S. Patent No. 6487605];

means for creating a registration entry for the Mobile Node in a mobility binding table [see claim 34, lines 4-5 in U.S. Patent No. 6487605]; and

means for sending a multicast message to a virtual router group to which the Home Agent belongs and with which the Home Agent shares a virtual IP address, the multicast message notifying the virtual router group of the registration [see claim 34, lines 6-9 in U.S. Patent No. 6487605; both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address.].

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the present application discloses of sending a multicast message to a virtual router group, whereas claim 34 of the U.S. Patent No. 6487605 discloses of sending a message to a standby Mobility Agent, which shares a virtual IP address known. In other words, both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address. Furthermore, it has been held

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that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. Therefore, it would have been obvious to one skilled in the art at the time of the invention to include or eliminate multicasting portion of sending a message since sending the message is sent to device(s) sharing the virtual IP address known.].

**Note:** Applicant is respectfully reminded to disclose all pending and patented related applications.

*Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 50 and 53 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 50 recites, "A computer-readable medium storing thereon computer-readable instructions for performing a method of maintaining Mobile IP operation in a Home Agent...instructions...registration." Computer programs claimed as computer listings per se, i.e., the descriptions or expression of the program, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and function interrelationships between

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the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, according the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, page 53, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and function interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

Claim 53 recites, "A computer-readable medium storing thereon computer-readable instructions for providing Mobile IP redundancy in a Home Agent...instructions...reply messages." Computer programs claimed as computer listings per se, i.e., the descriptions or expression of the program, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and function interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, according the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, page 53, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and function interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.



*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6 and 23-30 rejected under 35 U.S.C. 102(e) as being anticipated by Leung (U.S. Patent No. 6,195,705)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Leung discloses in a Home Agent, a method of maintaining Mobile IP operation, the method [see claim 12, lines 1-2, U.S. Patent No. 6,195,705] comprising:

registering a Mobile Node [see claim 12, line 4, U.S. Patent No. 6,195,705];

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creating a registration entry for the Mobile Node in a mobility binding table [see **claim 12, lines 5-6, U.S. Patent No. 6,195,705; the registration entry for the mobile node must be performed in the binding table**]; and

sending a multicast message to a virtual router group to which the Home Agent belongs and with which the Home Agent shares a virtual IP address, the multicast message notifying the virtual router group of the registration [see **claim 12, lines 7-10, U.S. Patent No. 6,195,705; both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address.**].

Regarding claims 2 and 27, Home Agent is not active [see claim 2, U.S. Patent No. 6195705].

Regarding claims 3 and 28, Home Agent is in a standby [see claim 2, U.S. Patent No. 6195705].

Regarding claims 4 and 29, Home Agent is in an active state [see claim 12, U.S. Patent No. 6195705].

Regarding claims 5 and 30, Home Agent is in a passive state [see claim 2, U.S. Patent No. 6195705].

Regarding claim 6, further comprising: registering a mobile node is performed in response to receiving a registration request from the mobile node [see col. 1, lines 64 to col. 2, line 19].

Regarding claim 23 Leung discloses in a Home Agent, a method of maintaining Mobile IP operation, the method [see claim 12, lines 1-2, U.S. Patent No. 6,195,705] comprising:

De-registering a Mobile Node [see figure 4, col. 10, lines 26-56, claim 12, line 4, U.S. Patent No. 6,195,705];

creating a registration entry for the Mobile Node in a mobility binding table [see claim 12, lines 5-6, U.S. Patent No. 6,195,705; the registration entry for the mobile node must be performed in the binding table]; and

sending a multicast message to a virtual router group to which the Home Agent belongs and with which the Home Agent shares a virtual IP address, the multicast message notifying the virtual router group of the registration [see claim 12, lines 7-10, U.S. Patent No. 6,195,705; both claims primarily suggest of the active Mobility/Home Agent on a network segment sending a message to an additional device(s) sharing the virtual IP address.].

Regarding claims 24 and 40, wherein the Home Agent implements a routing redundancy protocol [see col. 4, lines 5-15].

Regarding claim 25 and 41, wherein the routing redundancy protocol is HSRP [see col. 4, lines 5-15].

Regarding claim 26, Leung discloses in claim 1, lines 1-2 in a Home Agent being a member of a redundancy group including one or more Home Agents, a method of providing Mobile IP redundancy, the method comprising:

sending a multicast mobility binding table request to the redundancy group indicating that bindings present in a mobility binding table maintained by one or more members of the redundancy group are requested [see col. 4, lines 55 to col. 5, lines 13];

receiving one or more reply messages including one or more bindings associated with one or more mobile nodes [see fig. 4, sending reply message with binding table]; and

updating a mobility binding table maintained by the Home Agent with the bindings received in the reply messages [see col. 4 lines 26-56 and fig 4, Home Agent updates the mobile node entry in its binding table].

#### *Allowable Subject Matter*

5. Claims 7-22, 31-39 and 42-49 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

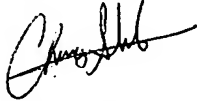
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May 1, 2006

A handwritten signature in black ink, appearing to read 'Chirag Shah', written over a horizontal line.

Chirag Shah

Patent Examiner, Division 2616